

**Amendments to the Claims**

Please amend claim 1 as provided below.

This listing of claims will replace all prior versions and listings of claims in the application.

**Listing of Claims:**

1. (Currently amended) A method of modulating myostatin activation, comprising contacting a latent myostatin complex comprising a myostatin pro-peptide and a myostatin C-terminal fragment, and a metalloprotease that can cleave the myostatin pro-peptide, wherein the metalloprotease is mammalian bone morphogenic protein-1 (BMP-1), with an agent that increases or decreases proteolytic cleavage of the pro-peptide by the metalloprotease, wherein the myostatin complex comprises SEQ ID NO: 2, SEQ ID NO: 4, SEQ ID NO: 6 or SEQ ID NO: 8, and wherein the agent is a peptide ~~selected from the group~~ consisting of SEQ ID NO: 9-22 and 23, thereby modulating myostatin activation.

Claims 2-4 (Canceled).

5. (Previously Presented) The method of claim 1, which comprises increasing myostatin activation, said method comprising contacting the latent myostatin complex and metalloprotease with an agent that increases proteolytic cleavage of the pro-peptide by the metalloprotease, thereby increasing myostatin activation.

6. (Original) The method of claim 1, wherein said contacting is performed on a sample *in vitro*.

7. (Original) The method of claim 6, wherein the sample comprises a cell sample, a tissue sample, or a biological fluid sample.

8. (Original) The method of claim 1, wherein said contacting is performed *in vivo*, said method comprising administering the agent to a subject.

9. (Previously Presented) The method of claim 8, wherein the agent decreases proteolytic cleavage of the pro-peptide by the metalloprotease, thereby reducing or inhibiting myostatin activation.
10. (Original) The method of claim 9, wherein, in the subject, muscle mass is increased, fat content is decreased, or a combination thereof.
11. (Original) The method of claim 10, wherein the subject is an animal raised as a food source.
12. (Original) The method of claim 11, wherein the animal is a mammalian species, an avian species, or a piscine species.
13. (Original) The method of claim 12, wherein mammalian species is an ovine species, a porcine species, or a bovine species.
14. (Original) The method of claim 12, wherein the avian species is a chicken or a turkey.
15. (Original) The method of claim 8, wherein the subject is a human subject.
- Claims 16-66 (Canceled).